IN THE SPECIFICATION

Please replace the text contained in the section titled "BRIEF DESCRIPTION OF THE DRAWINGS" in the disclosure originally filed in the application with the text provided below. No new drawings and subject matter have been added.

BRIEF DESCRIPTION OF THE DRAWINGS

[0010] Figure 1 is a block schematic diagram of a Magnetic Resonance Imaging (MRI) system;[.]

[0011] Figure 2 illustrates a conventional circuitry of an MRI system;[.]

[0012] Figure 3 illustrates the filtering module shown in Figure 2;[.]

[0013] Figure 4 illustrates a circuitry of the MRI system shown in Figure 1;[.]

[0014] Figure 5 illustrates an implementation of the circuit shown in Figure 4;[.]

[0015] Figure 6 illustrates waveforms obtained with a simulation comparing system using the circuit shown in Figures 4 and 5, with systems not using the circuit shown in Figures 4 and 5;[.]

[0016] Figure 7 illustrates a comparison between a coil current and phase with and without a presence of the circuit shown in Figures 4 and 5;[.]

~~[0017] Figure 8 illustrates landforms with and without a presence of the circuit shown in Figures 4 and 5.~~

Figure 8A illustrates waveforms with a presence of the circuits shown in Figures 4 and 5; and

Figure 8B illustrates waveforms without a presence of the circuits shown in Figures 4 and 5.

Please add the following descriptions between existing paragraphs [0026], [0027] and [0028] in the disclosure originally filed in the application. No new matter has been added.

[0026] Figure 4 illustrates a circuitry 116 of MRI system 10 including a gradient coil 120 which is part of gradient assembly 60 (shown in Figure 1). An inductor 122 (L_m and sometimes also referred to as M herein) is positioned to receive a current from a switching amplifier (not shown), and pass the switched amplified current (I_p) to coil 120. The input voltage to the circuitry 116, denoted "Vin" is provided from the switching amplifier. The voltage across the inductor 122 is denoted "VI". The switched amplified current (I_p) includes switching frequency ripples. A second inductor 124 (L_a) is coupled to inductor 122 via a transformer 126. A capacitor 128 (C_{aux}) is positioned between transformer 126 and coil 120. More specifically, a primary side 130 ($L_{primary}$) of transformer 126 is connected to inductor 122, and a secondary side 132 ($L_{secondary}$) of transformer 126 includes a first end 134 connected to second inductor 124 and a second end 136 of transformer 126 is connected to a first side 138 of capacitor 128. An output of inductor 124 is connected to the switched amplified current I_p at a first end 140 of coil 120. A second side 142 of capacitor 128 is connected to a second end 144 of coil 120 opposite first end 140. In one embodiment, a second capacitor 146 (C_{out}) is connected between first end 140 and second end 144. In other words, circuit 116 adds a modified output filter inductor, by adding a secondary winding, and an additional inductor and capacitor to the circuit shown in Figure 2. The capacitor in parallel with the output is sized such that a desired attenuation is achieved.

[0027] In use, I_p contains a switching frequency ripple, I_a (the current from second inductor 124) includes the same frequency ripple but at 180° out of phase with I_p,

therefore, when I_a and I_p are added together, gradient coil 120 receives a current I_{out} with substantially no switching frequency ripple as demonstrated below. In other words, circuit 116 operates by injecting a current I_a that is equal to the ripple in current I_p but with opposite sign such that the entire ripple is cancelled and I_{out} is free of all switching frequency ripple.

[0028] Figure 5 illustrates an implementation of circuit 116 wherein second side 142 of capacitor 128 is coupled to second end 144 of gradient coil 120 via a second transformer 150. In one embodiment, a first resistor 147 (Ro) is connected between capacitor 146 and coil 120, and a second resistor 149 (Raux) is connected between capacitor 128 and secondary side 132. In an alternative embodiment, circuit 116 includes first resistor 147 but not second resistor 149. As explained in earlier sections for the discussion of FIG. 4, Vin is the voltage input from the switched amplifier (not shown). Also, Iout and VI are the current to the gradient coil 120 and the voltage across the inductor 122 respectively.